

**IN THE CLAIMS:**

1-32 canceled

33. (currently amended) A method for the production of semiconductor layer structures, in which the layer for light product is at least one quantum film of InGaAsN or InGaAsNSb, and which contain comprising at least one strain-compensating layer for surrounding layer(s) of a semiconductor device, whereby the strain-compensating layer(s) are semiconductor-layers of Ga(PAs), Ga(NAs), or (GaIn)(NAs) strained by tensile stress and wherein the layer succession features one or several layers with arsenic and/or phosphorus by use of TBAs sources and/or TBP sources, wherein the strain compensating layer(s) are achieved and compressively or tensilely strained by MOVPE at a temperature equal to or less than 600 ~~in the range of 300°C to 590°C~~ by use of tertiarybutylarsine (t-C<sub>4</sub>H<sub>9</sub>AsH<sub>2</sub>) and tertiarybutylphosphine (t-C<sub>4</sub>H<sub>9</sub>PH<sub>2</sub>, TBP).

34. (previously presented) Method according to claim 33 wherein the strain-compensating layers are deposited within the layers to be compensated in their individual or common strain.

35. canceled

36. (previously presented) Method according to claim 33 wherein compression-strained semiconductor layers are compensated for their strain.